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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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WHAT THE PANAMA ROUTE IS.

The Panama route is but 49.09 miles long from ocean to ocean, which is but little more than one-fourth of the total length of the Nicaragua route. There is, therefore, less room for variety of features than is found on the Nicaragua line. The city of Colon, formerly called Aspinwall, was chosen by the old Panama company as the Atlantic terminus. The route then follows along the marshes in a southwesterly direction to a little place called Gatun, on the Chagres river. From that point it follows the line of that river in a general way to Obispo, thirty miles from Colon.

At Obispo the route leaves the Chagres river and enters the Emperador cut, which merges into the great Culebra cut, where the line crosses the continental divide. From the latter point its general course lies along a small stream called the Rio Grande until it reaches the waters of Panama Bay.

This route has attained great prominence within the last twenty years in consequence of the work done on it by the old Panama canal company, a French corporation of which Ferdinand de Lesseps was the head. It was not until 1883 that work upon a large scale was begun. The plan adopted was that of a sea-level canal and included a bottom width of seventy-two feet and a navigable depth of 29.5 feet. The entire cost of the work was estimated by De Lesseps in 1880 at about $128,000,000, and eight years for the time required.

Work under this sea-level plan was prosecuted actively until the near end of 1887, says a writer in Scribner's, when it became evident that the canal on a sea-level plan could not be constructed for the amount of money and time then available to the company.

CHICAGO A GREAT PORT.

In the thirty years since 1870, Chicago's shipping has more than quadrupled and in the tonnage of arrivals and clearances Chicago now ranks fourth among the ports of the world, following London, New York and Hamburg.

The latest figures relating to this matter are: London, 16,529,095 tons; New York, 16,445,320; Hamburg, 14,198,871; Chicago, 14,186,100; Antwerp, 13,573,472; Liverpool, 11,818,000, and Marseilles, 9,629,114.

Chicago leads all United States ports except New York in tonnage and the constant extension of lake traffic has added not only to the commerce of Chicago, but also very largely to the commerce of Cleveland; now a very important port of entry; Detroit, Buffalo, Milwaukee, Duluth and Toledo.

The chief articles of commerce on the lakes are wheat, flour, coal, iron ore and lumber. In 1871 the number of bushels of wheat passing through the "Soo" canal was 1,376,705, whilst last year the number of bushels was 60,000,000 or more than forty times as much as in 1871.

LIFE-SAVING CONGRESS AT NANTES.

Under date of March 1, 1902, Ambassador Porter, of Paris, sends copy and translation of a letter received from the Society of Life Savers of Brittany, relative to an international congress of life-saving, preservation of health, and maritime security which will take place at Nantes, July 31 to August 4, 1902, under the honorary presidency of the Minister of the Marine. The hope is expressed that the Government of the United States will be represented. The congress will consider life-saving in water and from fire, piloting in fog, life-saving on board steamships, moral and physical development of sailors and fishermen, etc.

It is to be hoped that Hon. S. I. Kimball, general superintendent U. S. Life-Saving Service, will be spared the leisure to attend this important international conference. The coasts of the United States present characteristics of all other countries, and life-saving rules in one district are in some instances not applicable in another. This view of the subject we endeavored to impress upon the service about a year ago and we can realize that there is much of value to be obtained from an international exchange of experiences and customs along this line.

COMMERCE OF THE WORLD.

One especially marked characteristic of the commerce of the United States, in comparison with that of other countries, is its large excess of exports over imports. Of the 30 countries whose average monthly imports and exports are shown by the Bureau of Statistics, only 12 show an excess of exports over imports. These 12 countries are Argentina, Brazil, Bulgaria, Canada, Chile, Egypt, British India, Mexico, Russia, Uruguay and the United States. The average monthly excess of exports over imports in the case of India amounts to about nine million dollars and Russia also about nine millions; while that of the entire list of countries which show an excess of exports over imports (exclusive of the United States) amounts to about 38 millions per month, while from the United States alone the excess of exports over imports is $42,637,127 per month.

The following table shows the average monthly imports and exports of the principal countries of the world during that part of the fiscal year for which figures have been received by the Bureau of Statistics. Average monthly:

COUNTRIES.	IMPORTS.	EXPORTS.
United States	$ 75,410,891	*$118,048,018
United Kingdom	212,208,056	* 113,274,048
Germany	112,584,769	92,760,421
France	75,602,250	66,736,023
Netherlands	65,922,642	56,790,923
British India	22,433,972	31,790,036
Russia (Europe)	22,457,583	31,310,500
Belgium	35,236,846	28,866,753
Austria-Hungary	28,853,158	28,517,390
Italy	28,080,802	21,653,575
Canada	15,463,905	16,900,028
Brazil	7,214,116	13,835,945
Argentina	9,164,263	13,487,170
Switzerland	17,661,468	13,453,048
China	16,411,195	10,377,338
Spain	12,913,456	10,167,924
Japan	10,838,691	9,754,509
Egypt	5,679,401	8,869,927
Sweden	11,933,538	8,739,792
Mexico	4,615,254	5,457,624
Cuba	5,517,491	5,449,376
Chile	3,909,702	5,100,104
Cape of Good Hope	9,057,554	4,466,735
Roumania	3,489,856	4,503,340

*Domestic exports.

THE first practical trial of a new system of the single-rail railroad is to be made at the Crystal Palace, London. The line, which is to be one and a half miles in length, will be worked by electricity. The difference between this system and the prevalent type of monorail is that the line is on the ground, and large wheels projecting from the middle of the carriage run on it, while on each side of the carriage there are safety rollers upon guide rails. In the monorail the line is elevated, with the carriage overhanging on each side. The experimental railroad will cost $70,000.

ANENT THE LATE SUBSIDY SHIPPING BILL.

While the late subsidy shipping bill is now dead and mummified, it is just as well to casually review some of the stabs it received from apparently its good friends and especially quotations which our commercial and maritime friends, the British, deem worthy of publicity.

The Shipping World and Herald of Commerce, London, in its latest edition, says:

"We have before us an article written for Leslie's Weekly, by Mr. Waldon Fawcett, in support of the Subsidy Bill. As it seems to us, it is enough to annihilate any case set up by Messrs. Hanna and Frye for their measure. Here is the sort of material used by Mr. Fawcett. He says:

'Each succeeding month brings fresh evidence of the rapidity of this advance (in American shipping). The recent establishment on the Delaware river, at a cost of several million dollars, of one of the most complete and thoroughly up-to-date shipyards in the world; the project for another plant of large proportions in this same shipbuilding center; the consummation of plans for gigantic shipbuilding plants at Norfolk, Va., and New Orleans, and the opening at New London, Conn., of an institution whose initial order is for the construction of the two largest vessels ever built in the world, are only a few of the more recent indications of phenomenal prosperity and activity in this field. More interesting still is the fact that, despite the remarkable expansion of American shipbuilding capacity, every plant adapted to vessel construction is overcrowded with work.'

"And all this is said in support of the proposition that the farmers of the West shall be taxed to supply profits to shipbuilders and shipowners. Amazing!"

Well! it is slightly off color, considering that Mr. Fawcett worked for some years in the very Hanna atmosphere, being in the same building and within a door or two of the Hanna suite, furthermore, his work on a marine public cation gave most people the belief that he was in favor of subsidizing shipping as a means of rehabilitating the United States mercantile marine. However, arguments in some cases are liable to be misconstrued, or partake somewhat of the nature of a double meaning. Mr. Fawcett now holds a government position, in the Bureau of Statistics, at Washington so can, or is supposed to write, with some degree of inside knowledge and official authority. Besides Congressmen and even Senators are more like ordinary people in Washington, and their personal views, net legislation, etc., doesn't meet with the same weight as when among their constituents.

THE PARSIMONY OF "UNCLE SAM."

A majority of our readers will no doubt be in accord with the views expressed by the Army and Navy Journal relative to our naval representation at the coronation of the British king.

Our contemporary states the situation in the following concise terms:

"It is a scorching reproach to the parsimony of the government that Capt. Charles E. Clark U. S. N., whom the President selected to represent the navy at the coronation of King Edward, has been obliged to decline the appointment for the reason that no funds are available to pay his necessary expenses. The niggardly refusal of Congress to make some provision for the representatives of the army and navy, at the coronation ceremonies, is a base reflection upon the dignity, patriotism and good taste of the American people. And in the case of Capt. Clark it places him in the painful position of having to remind the public that his many years of splendid devotion to his country have not been rewarded sufficiently to enable him to defray from his personal means the expense of a mission in which he would naturally be expected to maintain himself in the matter of expenditure on an equality with the representatives of other nations. There is no more justice in requiring Capt. Clark to pay his expenses in London out of his own pocket than there would be in requiring him to pay the expenses of a warship he was ordered to command. Happily, in Rear Admiral John C. Watson, who has been named for the mission, the government has a representative who is worthy of the best traditions of the navy and whose appointment will be heartily approved everywhere."

BUFFALO.

As usual throughout the entire season of navigation, masters and engineers change their boats for various causes. Capt. Andrew Lawrence, of Tonawanda, has taken charge of the steamer Kittie M. Forbes, vice Capt. D. O'Hagan.

All government buoys to be placed in the Niagara river this season are in position, the work of placing them being completed by the light-house tender Haze. Wednesday the Haze will put the new gas buoy for Seneca Shoal in position.

The Inland Lloyds have just published this year's Register, collaborated under the direction of Chief Inspector Capt. A. B. Drake. The surveys for May are printed in supplement form, as is customary for each month during the season of navigation.

The canal boatmen are still waiting to see the New York capitalists take their boats, which are under option, but so far nothing has been done. Still there is a report that some hitch in the proceedings has delayed the purchase and the organization of the company. Canal freights are 4 cents for wheat to New York, as at the opening.

The receipts of lumber at the Tonawanda ports as shown by reports from the Tonawanda and North Tonawanda custom offices for the month of April are 8,126,400 feet. At this time last year not a consignment of lumber had reached the Tonawandas by vessel. The first cargo this spring to reach here arrived in the steamer Oscoda for Lafeiver & Co., on April 14.

Some improvement was shown in the condition of package freight yesterday, the supply for westbound shipment being more liberal. The steamer Auburn, of the Western Transit line, which was tied up last week, will be again placed in service, loading for Lake Michigan. It is expected that another of the Western Transit boats, which has not been at work this season, will be loaded.

The Independent Towing Co. has added another tug to its fleet here. The vessel is the William Stevenson and formerly was owned by the Hingston & Woods Dredging Co., which failed recently. The Stevenson is comparatively a new tug. She is a wooden boat, built in Buffalo in 1887. Her length is fifty-one feet, beam fifteen feet, and depth nine feet. Capt. Thomas Higgins will be in the Stevenson, with T. V. O'Connor in the engine room.

Several changes of masters have taken place since navigation opened. Capt. H. D. Ray is now in the schooner Buckeye State in place of Capt. R. C. Smith. Capt. R. H. Johnson is master of the tug R. H. Halstead in lieu of Capt. W. H. Vroman. Capt. R. J. Walter will sail the City of Genoa, and Capt. J. O. Person succeeds Capt. C. J. Rathbun as master of the Annabel Wilson. Capt. W. H. Hutchinson will sail the steamer Oglebay and Capt. M. H. Clark the steamer Mars.

An important sale was consummated last week at Prescott, Ont., when the Wolvin syndicate, which recently organized the Great Lakes & St. Lawrence Transportation Co., purchased the tug Eddy and eight barges formerly belonging to the Prescott Elevator Co. The company will start a gang of men to work in fitting out the boats for a summer's work. Six of the barges will be taken to Quebec and two of them will remain on the river. The Wolvin representatives have been anxious to secure this fleet and were bidders a short time ago when the elevator and boats were offered for sale.

The Wells elevator is now a mass of ruins, burned to the ground by that enemy of all grain mills and elevators, spontaneous combustion. The fire commenced at the top and the structure was doomed from the first. This is the second destruction on the site of the Wells. The Coburn was the first, destroyed in 1862. It was rebuilt as the Wells, and in 1890 was partly destroyed in the fire that consumed the Eastern. The elevator was insured for $250,000. The loss on the grain in store is estimated at $150,000. The Cleveland & Buffalo line docks, which are adjacent to the burned elevator, escaped without damage. There is nothing left of the structure which was the last of the wooden elevators to be erected here.

Commission on Advances by Charterer.—A charterer is entitled to the stipulated commissions on advances made for the disbursements of the vessel upon entering on the charter, although she then had coal in her bunkers of equal or greater value, which the charter was bound to take and pay for, where the advances were actually required and made before an adjustment could be made of the amount due for coal. Gow et al. vs. William W. Brauer S. S. Co., 113 Fed. Rep. (U. S.) 672.

DULUTH-SUPERIOR.

A dispatch from Montreal says that the Wolvin syndicate has purchased the fleet of the Prescott Elevator Co., at Prescott, Ont., for $90,000, and will use the vessels in the grain trade between Quebec and the lakes.

Alger, Smith & Co., who operate a sawmill at Grand Marais, Mich., have sold 23,000,000 feet of high grade lumber to eastern parties. The consideration is about $600,000. This is the largest lumber sale of the year in the Lake Superior region.

Capt. E. B. Anderson is in command of the C. P. R. Liner, Manitoba, and Capt. McAllister is in the Alberta. These masters are not excelled in their line of work. They sail for good responsible owners and have the best attainable under their feet.

A time ball is now in operation at the U. S. branch hydrographic office, on the roof of the Torrey building, Duluth. The ball is hoisted five minutes before signal and dropped at the instant of mean noon standard time of the 90th meridian west longitude, equivalent to 6h. Greenwich mean time.

The steamer Tampa was released from her stranded position on the north shore after lightering 750 tons of her coal cargo. After discharging she will placed in drydock for survey when temporary or final repairs will be made on her. Her consort is also undergoing repairs to the stranding damage.

Because of an eddy current at the entrance of the ship canal, the new steamer America, of the Booth Packing Co. fleet, ran into a cement pier as she was going out on Sunday morning and suffered a damaged stem. The vessel, which is a new one, appeared badly damaged, though the full extent of her injury will not be known until she goes into dry-dock for survey and final repairs.

Preparations are being made for beginning the season of log towing from the north shore of Lake Superior this week. As a general thing, May 15 has been the first date at which it has been thought feasible to begin this work. The hastening of operations is due both to the season beginning practically a month earlier than usual and to the anxiety of loggers to get their timber to the sawmill.

Information has been received at the branch hydrographic office, Duluth, that Capt. C. A. Benham, of the steamer W. D. Rees, reports that the shoal off Big Sable Point (Point au Sable) extends in a northwesterly direction at least 1 1-10 (1¼) miles from shore. At a distance of 1,760 yards from the light-house only 8 feet of water is found.

The Barker dredge plant, consisting of seven dredges, five tugs and a dozen scows, has gone into the hands of the recently organized Lake Superior Dredging and Contracting Co. The company has had an option for two months. The new dredging company was formed some time ago, when it secured the E. T. Williams & Sons' plant. With the two plants, fourteen dredges in all, the new company will be able to cut quite a figure in dredging work.

The strike of Duluth longshoremen was settled on Sunday, closing a three day's conference between the Lumber Carriers' Association and the strikers. The men, who were offered 50 cents an hour, but held for 60, agreed to go to work for 52½ cents until such time as freights reach $? a thousand, when 53 cents will be paid. To-day's compromise does not effect other unions at the head of the lakes, which on advice of Duluth longshoremen, are holding out for 60 cents.

Two large steamers of the Pittsburg Steamship Co., Capt. A. B. Wolvin, general manager, occupy the drydocks at West Superior. The Charles R. Van Hise has a place in the new drydock, and large crews are working on her. The damage to the Van Hise is mostly to her bottom, which was damaged on the rocks last fall. Thirty-one new plates are being put on. The steamer La Salle is in the old dock for the repair of damage sustained on White shoals. About a third of her bottom is stove in, and her lower frame work was also torn away.

Representatives of all the lake and rail lines interested in flour traffic between the Twin Cities and the Atlantic seaboard, both for export and domestic consumption, met last week at St. Paul to consider the proposition submitted by the eastern trunk lines to fix 23 cents as the minimum rate to New York on both domestic and export flour. The proposition not only involved the increase of the export trade 2½ cents, but it involved the abandonment of the differential hitherto granted export flour. The lake and rail lines represented voted as a unit to preserve the differential, and, furthermore, to make the present rates permanent rates. Tariffs will be printed, effective May 5, establishing 20½c as the regular tariff rates on flour and 23c as the rate on domestic flour.

The movement of iron ore by lake from this district during April has eclipsed the record of the same month in any previous year in the history of the trade. The gain is due principally to the early spring, which allowed the handling of the ore and enable boats to get to Lake Superior when in previous years the ice fields still formed an embargo to navigation. During last month 973,335 tons of ore were loaded into vessels at the three ports at this end of Lake Superior. Last year in April practically no business was done and in April 1900, but 25,000 tons were shipped from Duluth. This year Two Harbors shipped 443,926 tons, Duluth, 314,409 and Superior 215,000 tons. The ore men are figuring on moving 3,500,000 tons a month during the next six months, and if they succeed in doing that, they will have moved 23,000,000 before going into November.

The new soft coal combine went into effect at the head of the lakes May 1. Hereafter all of the soft coal which will be sold from Superior and Duluth docks will be the property of the Fairmont Coal Co. and the Pittsburg Coal Co., the two concerns which have recently gone into a combine, to control the entire soft coal product. It is not expected that this will have any effect on local coal conditions. The docks at the head of the lakes will remain under the same ownership as formerly, but the coal they will handle will be trust coal and they will handle it on a commission. It is not believed that the change will have any effect in the management of the various docks, at least not at present. The same will be true with the retail dealers, with one exception. The city offices of the Northwestern people will be consolidated with the office of the Lehigh Coal & Coke Co., and one office will handle the coal of both docks. Another feature of the case is the fact that the Jones & Adams' new dock will not be an independent one, as was expected would prove the case. They have sold all of their coal properties to the trust people, and now, while they will own and operate their dock, they will handle trust coal like all of the other head of the lakes docks.

LETTERS AT DETROIT MARINE POST OFFICE.

To get any of these letters, addresses or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Stadstad, Ivar	Morin, F A
Walker, Wm F, 126	Kambell, Dell, Aurania
Lockhart, Wallace	Kendrick, Frank
Shey J, Masaba	Kahn, Wm C
Sampson, Arthur	Kingman, John F
Schmitt, J P 127	Heldt, August
Sherman, Frank	Hurdman, David
Smades, W L	Grieve, Wm S
Stowell, Mrs Alice A	Elmer, Alfred
Scott, John N	Cowen, Fred
Smith, Bert	Cox, Geo
Raltray, Geo	Church, D C, Bessemer
Relford, Bert	Bates, Desmond
Roman, Frank	Brown, Phil
Robinson, Wesley	Bretz, Joseph
Paddley, Newton	Andrews W E
Piffer Miss Annie	Ayotte, Tuffiel
Naden, Thos, Aurania	Henry, Wm G
Bassett, Ernest H, Marina	Cadotte Claude, Douglas
Bogart, Aug C, Joliet	Cooper, Warner
Beckbissinger, Wm G, Ira	Cornwell, Birdsey,
Queen	Ellis, Geo E
Forbes, Harvey	McKay, Angus G
Franklin, Jas	Olivet, Percy
Farrington, H D	Roseborough. Theo
Hester, B E W, Haward	Tomlin, Richard
Keeler, Vetta A	Wilson, Charles, Castalia
Kampmann, C H	Wiliby, Wm
Lavigne, Wm J .	Wilks, Grant
Like, Carl	Wilson, C
Lacy, Frank, Shaw	Webster, Ed
Mills, Capt Wm	

F. B. DICKERSON, P. M.

THE COLLINGWOOD SHIP BUILDING CO.

At the annual meeting of the Collingwood Ship Building Co., which was held recently, all of the shareholders were present, Mr. J. J. Long, president, presided.

Reports of the company's business for the past year were presented and considered highly satisfactory.

The company proposes to lengthen the drydock to 530 feet and increase its width to 76 feet, which will make it capable of docking the largest vessels on the lakes. These improvements will probably be under way within a few weeks.

The election of officers resulted in the re-election of those of last year. They are: J. J. Long, president; A. McDougall, vice president; Thos. Long, secretary-treasurer; C. Cameron and P. M. Campbell, directors.

DIRIGIBLE BALLOON—POLAR CRAZE.

In the words of the McDonnell Odometer Co., at West Thirty-fifth street and Kenzie avenue, engines and framework are being constructed for three big airships in which Patrick E. McDonnell hopes to reach the north pole next summer. He is confident that his machines will work, as the model has proved very successful. The airships will be built on dirigible balloon plan, and will be more than 400 feet long. It is claimed that several Chicago capitalists are interested in the scheme, the cost of which is expected to be within $50,000.

Sergeant Julius R. Frederick, a survivor of the Greely expedition, has promised to be one of the party to make the journey, provided the tests of the machines are successful.

CHICAGO.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, for the week ending noon, May 7th. Prevailing wind direction for the week N.E.; highest velocity 43 miles, from the S.E. on the 1st. Mean temperature for the week 57; highest temperature 82 on the 2d; lowest 42 on the 1st.

The steamer Yakima is having a hard time trying to get up Chicago river. The steamer secured the tug Hay, owned by the president of the Tugmen's union, and went aground at Dearborn street. That took a long time to get out of the mud, and then the captain decided to go it alone without a tug. This time he grounded on the top of La Salle street tunnel. The Yakima is drawing a little over seventeen feet, and it will take lightering, or a raise of water, to float her.

The Lumber Carriers' Association has sent out a circular notice of the compromise agreed to between that organization and the lumber shovers on Lake Superior. The terms of the agreement are that the men shall work under the same conditions as last year, except that they will obtain 52½ cents an hour instead of fifty, which is an increase of 2½ cents an hour over last year. The men have agreed to the terms, and work has generally been resumed, which has given a better tone to the lumber market.

A settlement of the strike of the linemen's and firemen's union against the Great Lakes Towing Co., which has tied up the tug trust's fleet at nearly all points on the Great Lakes, is said to be under way, and it was predicted that the strike would be over. The terms of settlement proposed have not been given out. The strike has proved a great annoyance to vesselmen in the handling of their ships and has inflicted a heavy loss to all engaged in the tug business, as well as the owners, shippers and consignees.

The Census Bureau has issued a report on chipbuilding on the Great Lakes, compiled from statistics collected in the last census. The number of tons of merchandise moved annually on the Great Lakes approximates very close to the amount of merchandise annually imported into and exported from the United States, but the distance it is carried is very much less. For this reason the commerce of the lakes can be caried by the use of tonnage approximately one-third as la.ge as is necessary for the carriage of American foreign commerce. The prolific development in the shipbuilding industrv of the lakes has challenged the attention of the shopbuilding world for more than a decade.

River accidents for April far exceed those in the same month last year, according to Harbor Engineer Burke. There were thirty accidents last month, as against eight for April, 1901. Several boats have crashed into the coffer dam at State street and accidents have occurred at most of the down town bridges. "The increase in accidents is very serious," said Mr. Burke, "and is likely to bring about a large number of suits against vessel owners for damage done to bridges. One cause for the accidents is that captains are steaming their own boats up the river because of the tugmen's strike. They cannot get tugmen and have to take their chance in navigating their own boats. Those vessels leaving the harbor are all heavily laden and are not easily handled when in the narrow stream under their own steam." This emanation from a city official leads vesselmen to think that commerce has no more rights in Chicago creek and that because of a tug strike the port should be considered in a state of blockade.

Eastern capitalists are said to be interested in a $15,000,000 deal for the improvement of the Calumet district. The gigantic scheme is reported to include plans for a harbor, elevators, docks and warehouse on the shore of Lake Michigan, just south of the mouth of the Calumet river. It is the intention to make this the point of transfer from western to eastern trunk lines. At present the four belt line roads—the Western Indiana, the Calumet Terminal, the Elgin, Joliet & Eastern, and the Chicago, Lake Shore & Eastern—come down to the mouth of the Calumet. The Baltimore & Ohio and the Pennslyvania are big trunk lines now in the district. There is now a breakwater off the mouth of the Calumet, and the government is making a 24-foot basin. The docks, elevators and warehouses would start at the south bank of the Calumet at the lake front and would extend southward for some distance. It is said that abstracts are now being examined with a view of purchasing the required property, part of which is now owned by the Calumet Dock Co.

FROM the accounts of the Western Assurance Co., of Toronto, for the twelve months ending 31st December last, it appears that last year the company received £227,678 of marine premiums, from which had to be deducted £56,830 for reinsurances, making a net total of £170,847. The marine losses, including an appropriation for all losses reported to 31st December last, totalled £122,583. The directors state that the marine income was somewhat less than that of the year 1900, but that the business of this branch shows a fair margin of profit, after providing for losses and the proportion of expenses chargeable against it. Two half-yearly dividends at the rate of 8 per cent. and 6 per cent. per annum respectively have been declared, as compared with 10 and 8 per cent. in the previous year.

CLEVELAND.

The steamer Joliet is now doing the towing at this port for the Pittsburg Steamship Co.

The Pretoria stranded at Ashtabula harbor was floated on Tuesday. After lightering part cargo two steamers of the same line succeeded in getting the vessel into port. The Pretoria had been aground for 11 days.

Mr. A. C. Deriecx, chief designer of the hull department of the American Ship Building Co., has resigned to accept the position of general superintendent with the Risdon Iron Works, which is building a large shipbuilding plant at San Francisco, Cal. Mr. Deriecx will leave here on June 1.

It is now expected that the United States Steel Co. will have about 22,000,000 tons of iron ore brought forward this season. The ore already sent down is a month ahead of last season's figures, and upwards of a quarter of a million more in tons.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, for the week ending May 7th. Prevailing wind direction S.E.; highest velocity 58 miles, from the west on the 4th. Mean temperature for the week, 60; highest temperature 85 on the 6th; lowest, 4 on the 1st. Sunrise and sunset data computed for local time, May 9th sun rises, 4:46, stes 7:07; May 12th, sun rises 4:42, sets, 7:10; May 15th, sun rises 4:39, sets, 7:13.

The latest arrival in the port of Cleveland from abroad was the steamer Imperial yesterday. She is an oil carrier owned by the Standard Oil Co., and her port of hail is London, England. She came here directly from Montreal, bringing with her barge 86, owned by the same company. The Imperial is loading a cargo of oil for Fort Williams, and will probably leave for the .Northwest to-day Whether she will remain in the lnke trade or not is a uestion yet to be determined.

A dispatch from Toledo says: Coal is coming forward rapidly to this port. There is a shortage reported at some of the coal shipping points, but the docks at Toledo are being rushed with business. At present Toledo is about 200,000 tons ahead of last season. The Hocking Valley Co. is running three machines night and day now where last year at this time thev were idle. Last year it was way into the middle of May before one machine and the first of June before all of the machines were in operation.

A rather novel way of pushing a vessel into port was resorted to by the steamer Samuel Mitchell at Ashtabula last Monday instead of going ahead of the barge and towing her. Lapping the bow of the steamer over the stern of the vessel, a line made them fast and the steamer pushed the schooner along ahead of her. The Mitchell propelled the Chicamauga and handled the after end of her very well, pulling the stern one way or shoving it the other, while a line was out from the dock to guide the tow of the schooner. The lack of tugs, owing to the strike, makes some of the older masters and pilots think of their schooner days.

The Licensed Tugmen's Protective Association on boats operated by the Great akes Towing Co. all over the chain of lakes, will be called out upon a strike to-night, (Thursday at 6 o'clock, in support of a demand made a month ago by the Cleveland local and not granted by the officers of the tug company. This is the result of a final meeting of the general grievance committee of the tugmen and the general officers of the tug trust held in this city yesterday. What steps wil now be taken by the Great Lakes Towing Co. it is impossible to state at this time. The stand taken by the tugmen absolutely ties up all of the ports on the chain of lakes, and, as far as tug service is concerned, the vessel men will be compelled to shift for themselves until more quiet times. The latter class have expressed their determination to continue working without tugs, the steamers towing the barges through the creeks, or working themselves into berths as best they may.

The naval reserve bills went through at Columbus, on Wednesday. One by Stage, of Cuyahoga, give the Cleveland battalion of reserves $6,000 for bringing the ship Hawk from the coast to Lake Erie. The other bill, by Hagenbusch, of Champaign, provides $9,000 for the support of the reserves for two years, $1,000 each year to the Cleveland and Toledo battalions, and $2,500 for the care of the Hawk. The latter bill caused a clash between Toledo and Cleveland reserves, as to who should have the Hawk and get money for its care. Toledo wants to force an election of a brigade commander, who would have power to locate the Hawk. The Toledo reserves are numerically stronger and would control. Mr. Fraser had inserted an amendment in the bill that money for the care of the Hawk should be distributed as ordered by the senior commanding officer. The Cleveland delegation consented, claiming that Capt. Wirt, of Cleveland, is now the senior officer and can spend money without the election of a brigade commander. Toledo members declare, however, that the money will be tied up unless an election is ordered. So far the adjutant general's office has refused. Mr. Fraser says the Toledo reserves, if the bill passes the senate, will mandamus the adjutant general to order an election.

The hearing of the fish trust case on affidavits that have been filed, will take place in the United States circuit court, Monday. Another batch of affidavits were filed Wednesday. They came from all parts of the United States and Canada, all of them to prove that A. Booth & Co., of Chicago, is a trust. Louis Cohen, A. C. Abrams, R. C. Garman, Solomon Berg, C. E. Benton and V. Prahl, Cleveland, dealers in fish, swear that after the formation of the alleged fish trust, in August, 1898, the prices advanced from 15 to 30 per cent., to local fish dealers, and all local dealers charged uniform prices, dictated by A. Booth & Co. Jas. Norgaard, of Chicago, swears that Booth & Co. bought all assets, property and business of nearly all responsible dealers and was known as a trust. For a year and a half this trust had absolute control of practically the entire output handled in the United States and Canada. Prices advanced greatly and it was impossible to buy in the open market, until the formation of the Buckeye Fish Co., Cleveland. Peter Lassen, of Port Huron, says that Booth & Co. absorbed all the business in the United States and Canada. L. G. Schiller, of Green Bay, Wis., foreman of the fresh fish department of Booth Co., at Chicago, swears to conversation with Penticost Bros., of Chicago, who, he claims, told him that Booth & Co. established the prices for fish, each week, in their general offices in Chicago. J. A. Smith attended an annual meeting in Chicago, and the report of W. V. Booth showed that the company controlled 75 houses and, that year, an additional investment of $1,000,000 had been made to extend the business. The auditor reported that the volume of business, that year, amounted to $13,000,000. E. A. Davis, secretary of the Producers' Fish Co., of Detroit, swears to a large number of letters from Booth & Co., in which uniform prices were fixed for Cleveland and other cities. W. F. Bethel, of Covington, Ky., and Albert Bethel, of Cincinnati, allege that Booth & Co. control the fish business in that part of the country. Henry C. Starr, of Middlesex, Conn., a dealer in netting, alleges that, after the formation of the combine, he was compelled to do all his business with the central house in Chicago.

DETROIT.

It is said that F. H. Clergue's original plan was to build a pulp mill at Sault Ste. Marie to cost $4,000, but his plans grew till the expenditure has reached nearly $20,000,000.

A revision in colors, of chart of Grand and Little Traverse Bays, has just been issued, and is now on sale at the U. S. Lake Survey office, 33 Campau Building, at 18 cents per copy.

Capt. James Carr, of the steamer Oscoda, fell to the bottom of the lower drydock on Tuesday morning, and suffered four broken ribs and serious internal injuries. Capt. Carr is from Chicago.

The new boat building by the Craig Ship Building Co., at Toledo, for the Adams Transit Co., of Detroit, will be called the Thomas Adams. Permission has been granted to change the name of the old steamer Tom Adams, now in commission, to Langham.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending May 6th. Prevailing wind direction for the week, N.E.; highest velocity, 33 miles, from the W. on the 6th; mean temperature for the week 62, highest temperature, 84 on the 4th; lowest, 39 on the 1st.

The steamer City of the Straits is to be chartered by W. J. Brown and put on the Cleveland-Soo run together with the steamer Pittsburg. The boats will stop at Toledo, Sandusky, Detroit, Port Huron, and Georgian Bay ports and will be in opposition to the Algoma Central line. The City of the Straits ran in the D. & C. line last season and has since received thirty-four additional staterooms.

The traffic through the "Soo" canal for April alone this year more than equals that for the entire season of either 1882 or 1883. The total tonnage for last season was 28,403,065, so that if for the balance of this season there is a business corresponding with that of last year, the close of navigation for 1902 will have a record of over 30,000,000 tons passing through the canals, and it is thought that it may reach 32,000,000.

The International Longshoremen's Association have issued a charter to members of the Marine Engineers' Beneficial Association. This action was voted upon a week ago. It is announced here that while those who secured the charter are members of local No. 3, and secured with the knowledge and consent of the local, they are not to bind the M. E. B. A. in any way, and their action has not received the official endorsement of the engineers.

The steel side-wheel passenger steamers Eastern States and Western States, built at Wyandotte, and hailing from Detroit, have been granted official numbers by the Bureau C. These are sister ships and their tonnage is exactly alike, viz. 3077 gross and 1566 net. It will be remembered that these are the two high classed speedy steamers that will be placed on the Detroit-Buffalo route this season.

Notice is given by Commander E. H. Gheen, U. S. N., inspector of the eleventh Light-House District, that on May 7, 1902, a gas buoy painted red and marked "St. Clair Flats Canal, Lower Entrance, East Side, No. 24," and showing a fixed red light 10 seconds; eclipse 10 seconds, will be established to mark the position of the former float light on the southeasterly edge of the lower end of the dredged channel leading into St. Clair Flats canal, and about 900 feet south by east, one-eighth east, from St. Clair flats lower entrance west side gas buoy No. 21.

TREASURY DECISIONS.

SUSPENSION OF LICENSE—APPEAL.

Decision of supervising inspectors on appeal from decision of local inspectors final, when all forms of law have been complied with in investigations under section 4452, Revised Statutes.

TREASURY DEPARTMENT, April 29, 1902.

GENTLEMEN:—Your appeal as counsel in behalf of Capt. Gourley, of the steamer St. Marys, from the decision of the local inspectors at Baltimore, suspending Capt. Gourley's license for eight days, under the authority conferred on those officers by section 4450, Revised Statutes, and subsequently sustained by the supervising inspector of the third district, under the authority of section 4452, Revised Statutes, was duly received and referred to the Solicitor of the Treasury for an opinion on the points of law arising therein.

The decision of the local inspectors to which Capt. Gourley objected was stated by the local inspectors in terms as follows:

* * * For unskillful navigation, thereby contributing to cause a collision between the steamers Georgia and St. Marys on the morning of January 29, 1902, near Lazaretto, Md.

Capt. Gourley's appeal to the Department from the above decision being, as understood by the Department, that the words "for unskillful navigation are too general" and indefinite to comply with the forms of law, and that the supervising inspector in practically sustaining the local inspector's decision had failed to apply the proper law to the "facts in the case," and that,—

I (Capt. Gourley) failed to understand and realize what article 28, Rule IX, was intended to convey to me, and that I stopped my vessel instead of going ahead at full speed.

The Solicitor of the Treasury, having carefully considered Capt Gourley's appeal, has rendered an opinion in which that officer decides:

First: "That the failure of the local inspectors, in this case, to specify in their decision in what respect Capt. Gourley was unskillful in the navigation of his vessel is not a failure to comply with the 'forms of law' to be observed in this investigation."

Second: The Solicitor is of the opinion that, the forms of law having been complied with, the decision of the local and supervising inspectors "is final, though they may have erred in their finding of facts, and in the construction of the law in its application to the facts."

Third: In regard to the construction to be placed upon article 28, the Solicitor decides that the three short blasts of the whistle referred to in said article, "indicating that the engines of the vessel 'are going at full speed astern,' is not a notice to the master of the other vessel that he should keep on at full speed," as contended by the supervising inspector in his decision. * * *

Respectfully, O. L. SPAULDING,
Messrs. WILLIAMS & BOND, Assistant Secretary.
Baltimore, Md.

[OPINION OF THE SOLICITOR OF THE TREASURY.]

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
WASHINGTON, D. C., April 24, 1902.

SIR: I have to acknowledge a communication from Assistant Secretary Spaulding, dated the 18th instant, transmitting the papers relating to an "appeal" by Capt. James Gourley from the decision of the local inspectors of steam vessels, and from the decision of the supervising inspector of the third district, finding him guilty of unskillful navigation of the steamer St. Mary, in the case of the collision between that vessel and the steamer Georgia, Capt. Almy, at the entrance of the harbor of the port of Baltimore, January 29, 1902. My opinion is requested upon two points which arise in this case.

First: Whether it is a full compliance with law to suspend an officer's license for "unskillful navigation" in general terms only, without specifying in detail the nature of the unskillfulness charged.

There is no law and no regulation which requires that the finding of the local inspectors shall specify in detail the nature of the unskillfulness ascertained. A regulation of the Board of Supervising Inspectors provides (Rules and Regulations, p. 80) that the accused shall be furnished with a copy of the charges, "setting forth specifically their character." You have been advised by one of my predecessors (Opin. Solr. Treasy. Nov. 19, 1888; T. D. 9139) that a failure to furnish a copy of such charges is waived by the appearance of the accused and his participation in the examination, in which opinion I concur. Such being the rule, it can hardly be contended that the failure of the local inspectors to specify in their decision the character or nature of the unskillfulness found is any ground upon which the proceedings of the local inspectors can be held wanting in compliance with the "forms of law." I have, therefore, to advise you that the failure of the local inspectors in this case to specify in their decision in what respect Capt. Gourley was unskillful in the navigation of his vessel is not a failure to comply with the "forms of law" to be observed in their investigations.

The second question propounded to me by the Assistant Secretary is, substantially, whether the supervising inspector of the third district has correctly construed article 28, of the pilot rules in its application to the facts of this case.

This is equivalent to an inquiry whether the supervising inspector has erred in his application of the law to the facts of this case. There is no law which provides for an appeal from the decision of the supervising inspector to the Department, and the Department has held, correctly I think, that no such appeal can be entertained (T. D. 6401). It has been held, however, that the Department may interfere and set aside the proceedings of the local inspectors or the supervising inspector, where the "forms of law" have not been complied with (T. D. 7278), as in case of a failure to furnish the accused with notice of the time and place of the investigation (as required by section 4450 of the Revised Statutes). If the "forms of law" have been complied with by the officers who make these investigations, I am of the opinion that their decision is final, though they may have erred in their finding of facts, or in their construction of the law in its application to the facts.

The "three short blasts on the whistle," provided for in article 28, indicating that the engines of the vessel "are going at full speed astern," is not a notice to the master of the other vessel that he should "keep on at full speed." It is not a notice or direction as to what particular course he should pursue, but is a notice of what is being done on the ship giving the three blasts, and that the master of the other vessel should do whatever may be necessary to prevent the vessels colliding. It may be that the only way to escape a collision would be to reverse the engines, while in another case safety would lie in going ahead full speed.

Very respectfully, MAURICE D. O'CONNELL,
The SECRETARY OF THE TREASURY. Solicitor.

ASTRONOMICAL DATA FOR MAY.

Astronomical data for May, 1902, furnished THE MARINE RECORD by the Washburn observatory:

Mercury is an evening star and will be in one of its most available positions for observation the latter half of the month. The planet reaches greatest elongation east, May 28th, when it will set two hours later than the sun and a little farther north on the horizon. Venus is still the bright morning star, but the planet is approaching the sun and diminishing in brilliancy. Mars rises shortly before the sun and at nearly the same place on the horizon. Saturn and Jupiter appear in the southeastern sky in the morning. The former is near the meridian at sunrise, followed by the latter farther east and north.

The times of sunrise and sunset at Milwaukee for the month are as follows:

May 1	4:46	6:52
May 11	4:34	7:03
May 21	4:23	7:13
May 31	4:16	7:22

The times of the moon's phases are:

New moon	May 7	4:45	p. m.
First quarter	May 14	7:40	a. m.
Full moon	May 22	4:46	a. m.
Third quarter	May 30	6:00	a. m.

The principal fixed stars visible during the month are: To the west—Capella, Castor and Pollux, Procyon and Regulus. To the east—Spica and Arcturus.

TO RETURN CONTRIBUTIONS.

Soon after the battleship Maine was blown up in the harbor of Havana, Cuba, an attempt was made to collect by popular subscription sufficient money to build a battleship to be named "American Boy." W. Rankin Goode, a boy orator of Cincinnati, made speeches and considerable funds were collected. In and about Cincinnati alone $20,000 was collected. Of this $6,000 is deposited in the Merchants' National bank of Cincinnati, to the credit of the "American Boy fund." The public schools of Cincinnati and suburbs were liberal contributors.

The question is now raised as to what to do with these funds, which are in different hands. Congress has refused to have anything to do with the matter. It is generally believed the money collected in different cities and still held will be disposed of as the persons in the different localities deem proper. Ex-United States Attorney John W. Herron and the father-in-law of Governor General Taft, of the Philippines, who has been consulted said that if no action is taken by the present Congress there will be a movement to have the funds returned to those donors who are able to prove the amounts they gave, and the balance distributed by order of the courts.

LAKE SUPERIOR WATER LEVELS.

The stage of Lake Superior in April, 1902, by the U. S. gauge at Houghton, Mich., was 0.27 foot above low water datum. This is 0.03 lower than for the preceding month, or practically the same. According to records kept by J. H. Darling, U. S. Assistant Engineer, Duluth, the readings for the latter part of the month, however, indicated that the lake was rising a little. The report of the Duluth forecast officer, Mr. Richardson, shows a deficiency in the rainfall for April of 1.09 inches, with reference to the normal for Duluth, and an accumulated deficiency in precipitation since January 1, of 2.48 inches; which has a bearing on the lake level. The April stage was 0.27 foot lower than in April a year ago, but it is 0.35 foot higher than the average April stage for a period of 26 years.

The Philadelphia Maritime Exchange has adopted a memorial to the Senate and House of Representatives favoring the passage of the bill granting pensions to certain officers and enlisted men of the Life-Saving Service and their widows and minor children.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED ESPECIALLY FOR THE MARINE RECORD).

Admiralty—Joinder of Causes in Rem and in Personam.—There seems to be no fixed rule of Admiralty practice, and no reason on general principles, which prevents the joinder in one libel of causes of action in rem and in personam, when such joinder will promote the cause of justice, and conduce to the convenience of the parties and the court, and is not governed by the admiralty rules of the supreme court. The Thomas P. Sheldon, 113 Fed. Rep. (U. S.) 779.

Towage—Injury of Tow—Negligence of Tug.—The master of a tug did not exercise reasonable prudence in attempting to take a tow under the Brooklyn Bridge when it was high tide, or nearly so, knowing that at mean high tide there was a margin of safety not exceeding one foot between the mast of the tow and the bridge, and the tug is liable for the damages caused by the breaking of the mast against the bridge. McMillan vs. Moran, 113 Fed. Rep. (U. S.) 755.

Maritime Liens—Breach of Charter.—The lien arising out of a contract of affreightment is created by the law, and is mutual and reciprocal between ship and cargo, attaching only when the cargo has been delivered on board or into the custody of the master, and being discharged when the cargo is delivered at its destination and the freight paid. Hence there is no lien in rem on a vessel for breach of a charter which is wholly executory, or which has been partly performed by the carriage and delivery of one or more, but not all, of the cargoes contracted to be carried. The Thomas P. Sheldon, 113 Fed. Rep. (U. S.) 779.

Suit in Rem to Recover for Services—Collateral Issues Between Ship and Cargo.—In a suit by a salvor against a ship and cargo to recover for salvage services the court cannot determine issues which may incidently or collaterally arise between the parties libeled. The ship cannot be required in such suit to answer to a claim of the cargo owners of negligent navigation as affecting the question of liability between ship and cargo, having been brought into court for a different purpose, and service of process on her proctor on behalf of the cargo is ineffective to raise such an issue. The James Turpie, 113 Fed. Rep. (U. S.) 700.

Sailing Vessels Meeting—Appearances Justifying Privileged Vessel in Changing her Course.—Under the navigation rules (26 Stat. 320), which require a vessel sailing closehauled on the starboard tack, on meeting another closehauled on the port tack to keep her course, unless a departure from such rule is "necessary in order to avoid immediate danger" (article 27), and make it the duty of the other vessel to keep out of the way, the privileged vessel is justified in changing her course when in the opinion of the officer in command, in the exercise of good judgment and seamanship, a collision will otherwise be unavoidable because of the failure of the burdened vessel to take timely action to keep out of the way, and in such case she cannot be held in fault, although a collision in fact results. The Zampa, 113 Fed. Rep. (U. S.) 541.

Charter Party—Cancellation—Liability of Charterer.—A charter party stipulated that the vessel should have ten days in which to load, with a specified demurrage thereafter; it being agreed that the charterer should not be liable for demurrage if he was prevented from loading by strikes, unless loading had begun, and that in case of a strike the owner might cancel the charter. The vessel remained eighteen days without loading, when its captain informed the charterer that a strike was imminent, and that the vessel was lying at the charterer's expense, and asked what concessions the charterer would make. The next day the captain wired the charterer for instructions and propositions, and the latter canceled the charter. Held, that the cancellation of the charter relieved the charterer from all liability for demurrage. Morgan vs. Garfield & Proctor Coal Co., 113 Fed. Rep. (U. S.) 521.

Collision—Steam Vessels Meeting—Negligent Navigation.—The steamship Queen Elizabeth, in tow of the tug Tyee, was passing up Puget Sound to the southward from Port Townsend, near the west shore, at about 4 in the morning, when they met the steam schooner Lakme, going out from Tacoma, which came in collision with the Elizabeth. The tug and schooner saw each other's lights when three or four miles apart, and were then nearly head on. Later the Tyee signalled her intention to pass starboard to starboard, which was acceded to, and she immediately starboarded her helm. Held, under the evidence, that she was justified in choosing the outside course in passing with her tow, owing to the nearness to the shore, and that neither she nor the Elizabeth were at fault, but that the fault for the collision rested entirely upon the Lakme, for being in charge at the time of an unlicensed and incompetent mate and too close to shore, for porting her helm, instead of starboarding, after answering the signal, and changing only when the vessels were in close proximity, and in failing to reverse at once when the danger of collision became apparent. The Lakme, 113, Fed. Rep. (U. S.) 772.

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CLEVELAND, O., MAY 8, 1902.

WE are pleased to receive a copy of a report on the survey of tides and currents in Canadian waters, collaborated by W. Bell Dawson, C. E., in charge of tidal survey work.

THE RECORD acknowledges, with thanks, the receipt of an invitation to attend the launch of the U. S. torpedo boat destroyer Stewart, on Saturday next, from the yards of The Gas Engine & Power Co, and Charles L. Seabury & Co., Con., Morris Heights, N. Y.

A FAVORABLE and marked feature which the Dominion Government has authorized, is the tidal and current survey in Canadian waters, and chiefly, in so far as the lakes are concerned, over the lower St. Lawrence. The Dominion Marine Department is entitled to the thanks of owners, underwriters, masters and pilots, also shippers and consignees, for the excellent results already accomplished in this direction, and further data will doubtless prove of inestimable value to the maritime commerce of Canada.

WHAT chance has a licensed officer anyway, if he gets into trouble? In this issue we present an opinion from the Solicitor of the Treasury, wherein he rules "that the decisions of the local and supervising inspectors are final, though they may have erred in their finding of facts, or in their construction of the law in its application to the facts." Here is a pretty "kettle of fish." Wrong in facts, wrong in law, yet no appeal tolerated. Under these conditions we must soon begin to parallel the merchant marine service with the Navy in washing out dirty linen at home, and carousing abroad. There is, something, many things, radically wrong with the Steamboat Inspection Service, and one of the features is a widespread individual authority on shoulders ignorantly overborne with responsibilities.

In the course of a month or two we will have two new large steel steamers in the Atlantic trade bearing the same names, to be closely followed by two others also with names duplicated. The vessels we refer to are the Minnetonka and the Minnewaska. The names being somewhat uncommon, the distinction will rest on reporting their ensigns. The Atlantic Transport Co. in building a fleet of four steamers placed orders for two with a Philadelphia firm and two to be built by Harland & Wolff, Belfast, Ireland. Whether pre-arranged, purposely or accidental the Irish built boats will be obliged to fly the red ensign and this alone will be enough to distinguish them from the lake built steel steamers Minnetonka and Minnewaska. Of course the Philadelphia built boats will fly the Stars and Stripes.

FOG SIGNALING.

For the past few decades the subject of imparting course or direction signals in foggy weather has been before the navigating, piloting and marine talent of the world with little or no practicable results.

It is in order to state that Germans and Americans appear to think that sound signals indicating a vessel's course can be given and understood with fair accuracy—other nations, and especially the British, are more skeptical on this point and fear that a babel of whistles would lead to dire confusion, especially in limited waterways.

There is, of course, an aspect to the question which perhaps has not received the particular and general attention it actually deserves, and that is, the amount of mental strain imposed upon all responsible for the safety of a ship when she becomes enveloped in fog. Taking this view of the case in point, Capt. H. Leithauser, of the Hamburg-American liner Patricia, has issued a pamphlet wherein he expresses his conviction that the existing rules in respect to navigating in fog are too arbitrary, though we can hardly say that we fully agree with him considering how thoroughly the matter has been threshed out since steam became the dominant factor in ocean and coastal navigation.

The greatest danger experienced in foggy weather is found when vessels are in with the land, and as a rule, this means in limited and probably crowded waters, with vessels carefully proceeding in all conceivable directions. It has also been sufficiently demonstrated that the formation of the land, wind and fog conditions exercise a positive agency in the aberration of the audibility of sound waves, hence, the dissatisfaction and uncertainty to be experienced when two, three or more vessels are in the vicinity and within occasional signaling distance of each other. Number one might in all good faith be replying to number three or vice versa, and the direction of each or both, assumed by number two, not to mention any more than the proverbial three, as therein would begin confusion worse confounded.

A modification of this babel of calliope sounds is advocated and so that the steam whistle may be made capable of performing the same service in fog that is performed in clear weather by the red and green lights. Upon coming within their sectors, the message is automatically exchanged between the ships, "I see you on my port," or "my starboard," as the case may be. Now, why, asks Capt. Leithauser, could not a similar message be conveyed by sound? The desirability of such a system seems obvious, but in order to introduce it the present rules and regulations for preventing collisions at sea is necessary, and this the officer referred to suggests should be done. He proposes that the following signals should be authorized: One long blast, one short blast, to indicate "I hear you on my port side in the red sector," and one long blast and two short blasts to indicate, "I hear you on my starboard side in the green sector." As the latter signal is at present assigned to towing vessels, telegraph vessels, and vessels not under command, a new signal would have to be adopted for them; one of three long blasts might, for instance, meet the case. And in this connection it should be borne in mind that even for this class of vessels, when signalling in fog, it would be more important to communicate the side sound signals, than simply to indicate their class.

The foregoing applies chiefly to salt water rules. The salvation of lake piloting in fog lies chiefly in the fact that all vessels are steering in similar or opposite courses, so that with this reference, and action accordingly, collisions in fog are at a minimum, considering the great traffic carried on.

THE Dominion Government is being buncoed out of its, or the people's money, to the extent of the cost of propagation as well as shore and floating supervision over the fishing industry. The Canadians ought to inquire into and determine who are the bona fide owners of their apparently locally owned and managed fish markets. By being buncoed, we mean that the industry is not fixed on the basis that they think it is, and that the yield of fish is probably farmed out to an unresident corporation. It is not the duty of the governments to bolster up an influential and wealthy syndicate to the exclusion and derogation of the humble toilers and fishers of the lakes. The fishermen must, perforce, endure "fisherman's luck," though we would like to see it tempered with equity and justice, and the acquatic laborer receiving fair recompense in all that he can win in his calling.

THE FISH COMMISSION—SYNDICATE STEAL.

Several of the lake dailies have been rushing into editorial gush this week under such captions as "The Lake Fisheries," "Fish as Food," "Food Fishes of the Great Lakes," etc.

The New York Fishing Gazette argues that there was never greater need of a national fish association than at present, when the beef trust is putting up the price of meat to a pont which is oppressive. "Any other industry," it says, "would have had meetings called and the best talent put forward to devise plans to encourage the consumption of fish as a substitute for meat, making clear the advantages of a fish diet, its healthfulness, etc., etc. It would improve the sale of fish by hundreds of thousands of pounds. We regret, however, that there is no organization, and it is a question whether there will be one for some years to come, not until new blood, with new ideas, etc., are infused into the business."

Fish association, indeed! One of the greatest monopolies on the face of the earth is the lake fishery association, or combination. It has bought out every independent industry on the lakes and adjoining territory, not to speak of its eastern, southern and western tentacles. It has now in the courts an injunction forbidding the use of or laying nets in the lake against the Edson Co., formerly one of Cleveland's most important and fairest firms in the fish industry.

A Toledo daily takes up the thread in a similar strain in stating that "the matter is one of local interest, for this is one of Toledo's own industries. Why do not the fish men of Toledo get together, and devise means to call the attention of the public to the advantages of fish as food? Or are they taking the narrow view that they may be able to put up the price of fish as the result of the advance in meats? If so, it is a short-sighted policy. Large sales and reasonable profits would bring them more money than the former course."

Get together is certainly good when they are bought up body and breeches by the omnipresent monopoly. The syndicate offered positions to the principals in the leading industries and when the monopoly obtained a full grip on the business these lucrative positions were rendered vacant, fishermen were paid less for their catch and the price to consumers soared away up, and this too, long before the meat trust thought of getting in their fine work on the gullibles who like to be humbugged at times.

Coupling editorials from Cleveland and Detroit papers quoting from the recent report of the U. S. Fish Commission we are told that "the high price of animal food is turning attention to the importance of fish food in the vicinity of the Great Lakes. The value of the product of the lake fisheries has hardly been realized even by those living along the lake border. The annual product of the Great Lakes fisheries has a value of about $2,600,000. Nearly 10,000 persons are employed and the capital invested in the fisheries is estimated at about $6,600,000. This is a vast industrial interest, adding a very valuable food product to our resources. Yet every one knows that the supply of food fish in the lakes is steadily decreasing, notwithstanding the efforts of the United States Fish Commission to restock the waters by means of hatcheries."

Certainly, the United States Fish Commission and even Congress, should do their best for the aggrandizement of the beneficent and humane monopoly which owns each catch taken from the lakes throughout the season and at their own price. Nor dare fishermen refuse to part with their catch at the foreordained and upset figure offered.

Realizing the existing conditions it must appear to those who have watched the industry, like a log rolling burlesque when informed that "What is needed on the Great Lakes is a permanent biological station, with a staff of trained scientific men, which should be devoted to the ascertaining of all the facts regarding our food fishes, the methods of replenishing the waters and of protecting the young fry against their natural enemies—those varieties of fish which prey upon them, while themselves valueless as food. A bill for this purpose was introduced in the Senate at the present session by Senator McMillan, of Michigan. The committee on fisheries, to which it was referred, has reported it favorably through Senator Bard, the chairman. It carries an appropriation of about $10,000, which is ample to inaugurate this important work. All concerned in commercial fishing, and all who realize the importance of the maintenance and increase of the supply of food fishes, should take up this matter, and urge upon the senators from their states the importance of passing the bill. The matter is one of especial interest to all lake cities and towns, and particularly to those on the shores of Lake Erie, where the fishery interests are most important."

It is surely a charming situation wherein a syndicate of exceedingly wealthy monopolists may command hard labor, facilitated by government scientists to sow, produce and reap a rich harvest to add to their already overflowing coffers.

Before Congress appropriates one cent of the people's

money towards the propagation of the finny tribe in lake waters it would be in order to ascertain how the industry is being conducted and to what extent the people would be further taxed to secure part of the product they had originally paid for, then perhaps it would be found that the irrigation of the western lands and the planting of liberal grain crops would eventuate in the greatest good to the greatest number of citizens and peradventure to the country at large.

It is surely not within the province of the people's representatives to tax the citizen in the direct interests of a distinct and positive monopoly any more than it would be to raise stock gratuitously and present same to the Swifts and Armours for disposal or sale at greatly enhanced prices.

The Great Lakes and tributary territory, and to a certain extent the eastern and western coasts, contains a large share of the country's population. Hence, if these citizens are being treated in any way wrongfully, as, unjustly discriminated against in the prices of fish food, fishermen, held in thrall, bondage, or industrial slavery by the rapacious maw of an insatiable monopoly, then, the subject is a large enough one for a Congressional investigation to lay open with a view to righting these wrongs.

It is rather difficult to understand why Senator McMillan, of Michigan, should father this national bill of expenditures, having in view the fact that it would only add to the wealth of the boasting, bloated principals of the unprincipled fish syndicate. It is equally as mysterious to note the unanimity of editorial sentiment displayed just at this time, in favor of dumping bushels of the people's money in the lakes with the same ultimate results. However, in placing conjectures to one side, we hope that the permanent biological staff of trained scientific men and the immediately requested appropriation of $10,000 will be delayed until the situation is well aired and completely understood.

"THE great schooner of to-day—six and seven masters—unlike the old clipper ships, are more suitable for the coasting trade. The numerous masts are utilized for carrying much sail, but this is low down, whereas the clipper ships, with their bows to cut the waves, carried sails high up. This was a decided advantage, for in a storm the ship, although depressed in the hollow of a wave, still had canvas which could catch the wind.—American Shipbuilder, New York." Strange how the same or similar conditions strike different people. The Shipbuilder evidently thinks it correct and a joyful thing to have royals and skysails sheeted home over reefed tops'ls and courses. The ordinary flat-foot or salt water laborer usually stretches his flying kites to catch what little air in motion there may be aloft when it is a dead, flat calm down below, and thus jolly along through the doldrums or any belt of calms. To go off on another tack, which, however, is applicable to the foregoing, the student or novice in handling a vessel under canvas was asked which was the best situation for a vessel to be placed in on a dark, stormy night in the North Atlantic. He at once replied, and without any reservation, "Close hauled on the starboard tack, for then everything would be bound to keep clear of me." As a matter of fact and practice the, let us say, juvenile, picked out the most risky, half-tide rock sort of a position that he could place himself in, and was forced to stay there up to the moment of imminent danger of collision.

BY ALL means stock the lakes with food fish, propagate the very best obtainable in due abundance, regulate the catch thereof relative to size, seasons, taxes, tariffs, etc., but by all that is square and righteous don't do all of this for the principal welfare and glory of one single company. Syndicates are hard to buck against even when denied the financial, moral and scientific aids of a sometimes too liberal government, backed by Congress they become omnipotent, aggressive, arbitrary, slave-driving, pelf and blood suckers.

DR. A. BERGER, of Sorbonne, suggested in a lecture delivered before a number of scientists at Paris the other day that an international monument should be raised to the memory of the late Lieut. Matthew F. Maury, of the United States, the pioneer of modern meteorology and hydrography.

UNITED STATES ENGINEERS are considering the question of raising the level of Lake Erie by damming the Niagara river. It might be well for Canadian engineers to also consider the effect of such a work on the level of Lake Ontario and the St. Lawrence. Buffalo and the upper lake cities are not the only places interested in lake navigation.

IT IS a question if the Coast and Geodetic Survey is furnishing up to date information regarding the tides, currents and other characteristics of our Eastern and Western coasts. Costly expeditions snooping around the Philippines, Porto Rico, and Cuba might be of more service to the country's commerce if found floating around nearer home.

REAR ADMIRAL William Thomas Sampson, U. S. N., born at Palmyra, N. Y., February 9, 1840, died at Washington, D. C., May 6, 1902.

LAKE FREIGHTS.

There is a slight change for the better in chartering, and the market is not as lifeless as experienced last week. Tonnage seems to be regularly placed, with slight fluctuations, at former rates, though detention is still noticeable at ore discharging ports, mainly on account of a lack of cars, also a steady stream of arrivals.

Grain.—Chicago to Buffalo 1⅛ cents on corn and 1¼ cents for wheat with moderate chartering. Duluth or Fort William to Buffalo 1⅞ cents on wheat has been taken, an advance from 1½ cents, and 1¾ cents offered on flax, this is equal to about 2 cents on wheat or 75 cents on ore, which is now considered the minimum rate.

Iron Ore.—There is no change in rates and there is a regular easy strain of chartering. The only marked feature is detention at discharging ports, and now that grain is being sent forward an indication among the best carriers to shunt off from the coal and ore to the grain trade.

Coal.—There is an easier feeling at Buffalo on account of encouraging reports on the strike situation at the mines, still, the rates are steady with fair chartering at 30 cents Lake Superior, 40 cents Lake Michigan. The last charters from Ohio ports were placed at 45 cents Lake Michigan, and 35 cents Lake Michigan.

Lumber.—Now that the strike among the lumber shovers at the head of the lakes has been settled, loading is brisk at the $2.50 rate per M feet, and there is every indication that the stuff in condition to ship will now be sent forward as fast as possible.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MINNESOTA.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., April 29, 1902.

GRAND MARAIS WEST BREAKWATER BEACON LIGHT.

Notice is hereby given that, on or about May 10, 1902, a fixed red lens-lantern light will be established on the outer end of the westerly breakwater at the entrance to Grand Marais harbor, northerly side of the westerly part of Lake Superior.

The light will be shown thirty feet above mean lake level and will illuminate the entire horizon. The lantern will be suspended from a bracket at the top of a brown iron post with a small, while oilhouse at its base.

By order of the Light-House Board:

N. H. FARQUHAR,
Rear-Admiral, U. S. Navy, Chairman.

APPOINTMENTS OF OFFICERS.

Vessels owned and operated by James Davidson are officered as follows: Shenandoah, Capt. Geo. C. Burns; engineer, Geo. M. Wise. Orinoco, Capt. Chas. Ainsworth; engineer, W. J. Downing. Amazonas, Capt. E. Smades; engineer, J. A. Southgate. Cartagena, Capt. W. L. Montgomery; engineer, Harry E. L'Hote. Venezuela, Capt. Walter M Mahon; engineer, Geo. W. Marshall. Nicaragua, Capt. Wm. G. Maltby; engineer, Ed. Taubert. Bermuda, Capt. H. J. Hagan; engineer, Ed. Taubert. Schooner Granada, Capt. Geo. Williams; Paisley, Capt. Lawrence Coleman; Grampian, Capt. A. Gustafson.

Chartered and operated by Algoma Central Steamship Co., Sault Ste. Marie, Ont: Steamship Rappahannock, Capt. John L. Bradshaw; E. W. Tilley, engineer. Steamship Sacramento, Capt. Harry Gunderson; A. G. Olmsted, engineer. Schooner Pretoria, Capt. E. J. Starkey. Schooner Matanzas, Capt. Martin Johnson.

Lake Navigation Co., Walkerville, Ont., Urania, Capt. F. R. Dale, Engineer H. Linter; Imperial, Capt. E. W. McCormick, Engineer Silas Heverley.

Lake Mich. Car Ferry Transp. Co., Chicago, Ill., S. M. Fischer, Capt. Fred. Johnson, Engineer S. J. West; J. C. Ames, Capt. W. H. Welcher, Engineer Bret Rasch; Transport No. 1, Capt. Matt Emerson; Transport No. 2, Capt. Wm. Chambers.

DETROIT RIVER BRIDGE AGAIN.

If the members of the company being formed for the purpose of building a tunnel under the Detroit river are banking on the financial assistance or even the sympathetic co-operation of the Vanderbilt railway interests, as has been suggested, there is deep disappointment in store for them, according to President Henry B. Ledyard, of the Michigan Central Railroad.

"If the Vanderbilts desired a tunnel they would build it with their own money and without the assistance of any promoting company," declared Mr. Ledyard.

"But the Michigan Central doesn't want a tunnel. That will be the last resort for relieving congested traffic. Tunnels are not popular. They kill passenger traffic. Ask the Grand Trunk people what they think of their tunnel at Port Huron. The day is coming when transportation facilities across the Detroit river will have to be increased and the solution of the problem is in convincing the vessel owners that they are not the only people on earth and having them withdraw their opposition to a bridge.

"Why under the sun should the vessel owners object? There are three points along the lakes—the Limekiln crossing, the St. Clair canal and the "Soo" canal—where nature has placed greater impediments to navigation than a railway bridge at this point would be. The government has spent millions in overcoming these obstacles and yet the vessel interests buck us when we suggest a bridge that wouldn't hamper navigation a whit. Detroit is the only city in the country that would tolerate such interference by the vessel interests.

"But rest assured of this—when the Michigan Central betters its transportation facilities across the river it will do so at its own expense; no one else will be in the deal to make money out of it.

"As to the proposed subway, I can't see of what possible use it would be. Who would use it? Not the Michigan Central. It might do for a promenade."

IMMENSE CHAIN CABLES.

The contract for 3-3/16-inch chain which was recently awarded to the Newhall Chain Forge & Iron Co., of 9-15 Murray street, New York, is now nearly completed, and the following tests were made on a section of this chain by Lloyd's Registry, of England, at shops of Lebanon Chain Works, Lebanon, Pa. Lloyd's Registry requires a breaking strain of 220¾ gross tons, or 494,480 pounds on 3-3/16-inch chain.

The first test was run up to 510,000 pounds and developed no defects in chain.

Second test of 549,500 lbs., broke jaw and feed of testing machine but did not fracture a weld or link of the chain, thereby not only proving that the chain exceeded the requirements by 55,020 pounds, or 27.51 tons net, but leaving a doubt as to what strain would be required to part the chain.

This stud link chain is probably the largest ever manufactured in the world, and consists of about 6,000 feet.

This chain is known as the "Branded Warwick," and was made for the Eastern Ship Building Co., of New London, Conn. It is to be used on the two largest freight steamers ever built, owned by the Great Western Steamship Co., and the Northern Pacific Railroad Co.

SHIPBUILDING IN NAVY YARDS.

Several representatives of labor organizations in industries related to shipbuilding appeared before the House Committee on Naval Affairs recently, to urge the adoption of plans providing that warships for the government shall hereafter be constructed in the navy yards. These gentlemen contended that the building of ships in the navy yards would be a good thing not only for the government and for labor interests, but that it would appeal to the patriotism of the people. They held that the government could compete successfully with private firms and insisted that the navy yards should be allowed to bid against outsiders for the construction of all new warships. They did not dispute the chairman's statement that wages in the navy yards were about fifteen per cent. higher than those paid in private yards, but declared that for fifteen per cent. higher wages the government gets twenty-five per cent. higher skill. Nor did they attempt to explain why it is that, whereas none of the ships built in private yards has cost more than $700 per ton, those built at the navy yards have cost an average of $860.46 per ton. The labor delegates were reminded that the majority of the Navy Department experts were agreed that the work could not be done as cheaply at the navy yards as in private establishments and that the Secretary of the Navy had stated that it would cost forty to fifty per cent. more if done at the navy yards—but notwithstanding this, the delegates expressed the opinion that it would be right for the committeemen as members of Congress to discriminate in favor of labor organizations and give them the work at an increased price over that for which the government can have it done by contract. The matter was taken under advisement.

Tugs and Tow—Liability of Tug for Loss of Tow—Improper Coupling.—Evidence considered, and held in sufficient to sustain the allegaton of the libel that the sinking of a barge while being towed with others was due to the fault of the tug in improperly coupling the barges to each other. The Pencoyd, 113 Fed. Rep. (U. S.) 682.

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Burn Continuously

from 80 to 365 days and nights without attention, and can be seen a distance of six miles. . . . . .

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160 Broadway, New York City.

NOTES.

THE U. S torpedo boat destroyer Stewart, will be launched from the yards of the Gas Engine & Power Co., and Charles L. Seabury & Co. Con., Morris Heights, N. Y., on Saturday, May 10th.

EMPEROR WILLIAM has ordered Director Fritz, of the government shipyard at Kiel, to proceed to the United States and study the methods of the American shipyards, particularly as regards labor saving machinery.

THE invasion of American steel and iron products has caused such alarm that German cast iron works and foundries are preparing to form an iron trust to defend the home industry. Negotiations now under way disclose that an agreement has already been signed by all the large iron concerns. The combination will fight the "American invasion" tooth and nail." In a few days the Reichstag tariff commission will take up the debate on increased tariff on American goods.

LIEUT. BEECHER, U. S. N., the naval expert in wireless telegraphy, has returned to Washington from his trip to the North Carolina sounds, where he inspected the Weather Bureau system of wireless telegraphy installed between Roanoke and a point on the main land opposite Hatteras, a distance of 50 miles as the crow flies. The system was found to work over that distance with absolute accuracy. reliability and high speed. The latter is attained by abandoning the troublesome "coherer," which is an indispensable part of almost every other style of apparatus.

FOR the first time in history all the lake custom houses are receiving instructions to register the crews on the various boats which are registered in their districts. The facts thus gathered will be registered in the government marine blue book. The Marquette office expects that it will shortly be asked to compile a list of seamen now employed on boats in that district. This is a new departure by the Treasury Department, and is regarded as an effort on the part of the officials at Washington to ascertain the true maritime strength of the country. When the statistics are complete, every sailor, and individual, in anyway connected with shipping on the lakes, rivers and seas, will be registered by the government.

THE steam sirens for fog signals were investigated last summer by the British light-house board, but apparently without any important discovery regarding the curious soundless zones that surrounded the sirens at various distances. The fact that such zones exist was discovered by the American light-house authorities, and more than a quarter of a century ago Tyndall expounded the theory that they were caused by an interference with the direct sound waves by those reflected from the surface of the water. One result of the late investigation was the discovery that in calm weather a low-toned siren, with notes of 98 vibrations, will carry more than 20 miles, while higher-pitched tones are lost at ten. In windy weather, however, the high notes are heard the greater distance.

ORIENTAL COMMERCE

In a review before the National Geographic Society of Washington, O. P. Austin, Chief of the Bureau of Statistics says that in spite of the disadvantage under which the United States labors as compared with other countries, it has made more rapid gains in commerce with the Orient than any other nation, our exports to the Orient having grown from $40,000,000 on 1891 to $115,000,000 in 1901, an increase of 180 per cent., while the total exports were increasing but 50 per cent. Our imports from the Oriental countries increased during the same time from $105,000,000 to $162,000,000, an increase of over 50 per cent., while the total imports of the country were increasing but 10 per cent. An examination of the commerce of other nations with the Orient shows that that of the United States has grown with much greater rapidity than that of the other countries competing for that commerce.

THE GERMANS AND MORGAN STEAMSHIP MERGER.

An official statement of the terms of agreement between the German steamship lines and the syndicate formed by J. Pierpont Morgan, is now published. The agreement with the Hamburg-American Packet Co. and Mr. Morgan, it appears, was concluded last March.

Under the contract, it is claimed, the German lines have preserved their independence in every respect. The syndicate is bound not to send a ship to any German harbor without permission of the German lines, which in turn bind themselves not to increase their present traffic from England to the United States beyond a certain fixed point. Many other clauses in the agreement aim at preventing competition between the syndicate and the German lines.

Neither may acquire shares in another, but they are to mutually support each other, by chartering steamers or otherwise, in fighting competing third parties.

A committee is to be formed, consisting of two representatives of the syndicate and two representatives of the German lines, for the settlement of all questions concerning their mutual interests. This committee will have no executive power, and any differences in construing clauses of the agreement must be submitted to arbitration.

The duration of the agreement is limited to twenty years, but either may terminate it after ten years, or demand a revision of the contract, and withdraw if revision is refused.

ANOTHER ARCTIC EXPEDITION.

Plans for the auxiliary Baldwin-Zeigler expedition to northern polar regions have been completed, and the men who have been entrusted with its direction and management will shortly leave for Europe. The steamer Frithjof, which, with the America, conveyed the Baldwin party to Franz Josef land, has been chartered for the work and will depart from Tromsoe on July 1.

The auxiliary expedition will be in charge of W. S. Champ, secretary to Wm. Zeigler, who will sail for Europe on the steamship Cambric.

The Frithjof will go from Tromsoe to Camp Zeigler, on Alger island, which is 80.24 north, and there secure the last instructions left by Baldwin.

It is believed here that Baldwin has worked to the northward of Alger island, and that the America is fast in the ice. When the America is found an effort will be made to refill her bunkers with coal and work her out of the ice pack. It is thought Baldwin used the America for winter headquarters, and worked north with sledges, establishing caches preparatory for the dash to the pole.

Baldwin's associates are of the opinion that he began his northern movement for the pole about the middle of February, and that he will reach the highest point about the middle of June, and the Frithjof expedition is timed to meet him. Mr. Camp's plan, after releasing the America, will be to establish a patrol with the hope of picking up the Baldwin party.

REGINA.

60 foot naphtha yacht. Two 12 H. P. Motors built by the Gas Engine & Power Co., and Charles L. Seabury & Co., Con. Morris Heights, N. Y

SUN'S AMPLITUDES.

The following approximate amplitudes of the sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
May 9	E. 23° N.	= N. 6 E.	= E. N. E.
May 16	E. 26° N.	= N. 5⅝ E.	= E. by E. ⅜ N.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
May 9	E. 24° N.	= N. 5⅞ E	= N. E. by E. ⅞ E.
May 16	E. 27° N	= N. 5⅝ E.	= E. by E. ⅜ N.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
May 9.	E 25° N.	= N. 5¾ E.	= N. E. by E ¾ E
May 16.	E. 28° N.	= N. 5½ E.	= N. E. by E. 6½ E.

LAKE SUPERIOR, LAT. 48° N.

Date.	Amplitude.	Bearing P'ts.	Bearing Comp.
May 9	E. 26° N.	= N. 5¾ E.	= N. E. by E. ¾ E.
May 16	E. 29° N.	= N. 5⅜ E.	= N. E. by E. ⅜ E.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, report the condition of the eastern freight market as follows:

Whilst there is no improvement to report in the grain situation, freights in other directions show some slight advance, particularly for timber from the Gulf, from which direction a better demand has manifested itself. There has also been quite a few fixtures for deals from the provinces at rates last reported. Owners, generally, however, are still pursuing a waiting policy and as tonnage bound in this direction is not excessive, there is a likelihood of freights from this coast developing a somewhat firmer tone. The fixtures reported both from the Atlantic and Gulf cotton ports are taken principally to fill old phosphate contracts, charterers relying on picking up stray lots of cotton that usually offer at the close of the season. The demand for long voyage tonnage is very limited, charterers having filled their pressing wants for the time being. The coal situation having been settled, shippers are now more inclined to talk on new business and some few fixtures have already been effected, as indicated in this week's report.

There has been scarcely any inquiry for sail tonnage, but it cannot be said that the market has been influenced, as a reluctance is shown on the part of owners entertaining lower bids.

Grain charters, Liverpool or Glasgow, 3 cents; London, 3½ cents; Bristol, 5 cents.

THE Government of the Dominion of Canada has concluded an agreement with Signor G. Marconi for the establishment of the Marconi wireless process of transmitting messages between Canada and Great Britain and the Continent of Europe. The agreement under certain conditions involves a lump sum of $100,000.

REPORTED BY THE LOOKOUT.

The Newport News Shipbuilding and Dry Dock Co. has closed a contract to build an ocean-going tank steamship for the Saginaw Steel Steamship Co. The vessel is to be 10,000 tons capacity, 400 feet long, 50 feet beam and 20 feet draft.

The Shipping World says that the demand for officers of sailing ships in London is at present much in excess of the supply. Considering that for the chief mate's berth on a four-masted sailing vessel the munificent salary of £8 ($40) per month is now on offer, the want of alacrity on the part of officers to come forward does not seem to be a matter of very great wonder.

Capt. Luther B. Dow, Grand Counsel of the American Association of Masters and Pilots, has sent out the annual report of the Grand Executive Committee of that organization. The book contains over 500 pages and is filled with matter of much interest to steam vessel officers, also a directory of the Harbors and their principal officers. Capt. Dow's address is 974 Madison street, Brooklyn.

Messrs. Spon & Chamberlain, publishers and importers of books, after 15 years in business, at 1 Courtlandt street, New York, are moving into more convenient offices, in the Liberty Building, 123 Liberty street, New York. These publishers make a specialty of works on civil, mechanical, electrical and marine engineering, the industrial arts, etc.

Capt. Reuben Wynne, one of the best known of the old-time mariners on the lakes, is dead at St. Catherines, aged sixty-eight. He was on the tug Robb, which was employed as a gunboat on the Niagara river, by the Canadian government, at the time of the Fenian raid in 1866, and was the leading organizer of the Niagara District Veteran Volunteer Association.

At Toledo on Thursday last, Alvin Peter libeled the steamer S. C. Reynold, of the Wabash line. The papers have been filed and they sate that on May 20, 1901, the steamer James Fisk, Jr., was run into by the Reynolds, near Grosse Point, and damaged to the extent of $20,000. The Lake Erie Trantsportation Co., owners of the Reynolds, immediately filed a bond for the above amount, and the steamer was released.

An extensive ship yard is to be built at Halifax, Nova Scotia, for the building of fast Atlantic steamers. The capital of the company will be several million dollars, and G. B. Hunter, of the great English ship building firm of Swan & Hunter, is to subscribe one-half the total amount of money necessary. The Legislature of Nova Scotia and the city of Halifax will appropriate considerable sums for the promotion of the enterprise.

The Allan Line steamer Huronian left Glasgow February 11, for St. John, N. B., and has not since been reported. The Thames was detailed April 9 to search the North Atlantic for the missing vessel, and the British Admiralty has ordered the British third-class cruiser Bellona to join the second-class cruiser Thames in searching for the missing steamer. The Bellona will cover 21,000 miles of the northwestern part of the Atlantic.

A strong effort is to be made to have the channel to the government dock at the "Soo" deepened. For some time past there has been considerable kicking by vessel men on this matter, and at the last meeting of the Canadian "Soo" council the Northern Navigation company, of Collingwood, said in a communication that something had to be done. It was decided that a strong resolution be drafted by the mayor and town solicitor and sent to the minister of public works, asking that the channel be deepened.

Since the annual meeting of the Lake Carriers' Association held last January in Detroit, Capt. George P. McKay, treasurer, has increased the net tonnage enrolled in the association from 874,000 to 920,000 tons. It is his intention to seek to increase it to 1,000,000 tons before the next annual meeting. As chairman of the committee on aids to navigation of the Lake Carriers' Association, Capt. McKay issues a warning. Last year the gas buoy which is maintained at Bar Point by the Canadian government was carried away by vessels four times. The Petrel replaced it, but served notice that if it was carried away again it would not be replaced. Capt. McKay suggests to vesselmen that the gas buoy was put there to indicate the channel and not as a target.

During the winter as high as 9,000,000 bushels of wheat have been stored in the elevators along the line of the Canadian Pacific Railway, but at present they only contain a little over 5,000,000 bushels. During April there was some rapid moving by water out of Fort William. Between April 12 and 30, 4,000,000 bushels were shipped, an average of over 22,000 bushels a day.

It has been discovered by soundings, made by the insurance men since the mishap to the steamer Choctaw in Marquette harbor, that there is a little less than 18 feet of water at the spot where the steamer struck. The shoal place is abreast of the end of the breakwater and in line with the ore dock. It had been supposed the water was much deeper there. Next week systematic soundings will be taken in the upper harbor and at its entrance by the tug Schenck.

Government Proposals.

U. S. ENGINEER OFFICE. Jones' Building, Detroit, Mich., April 19. 1902. Sealed proposals for dredging, and other work required for removing obstructions to navigation in main ship channel in Detroit river, will be received here until 12 noon, (Standard time), May 19th, 1902, and then publicly opened. Information furnished on application. W. H. BIXBY, Major, Engrs. 17-20

FOR SALE One Air Pump 31 inch diameter, 12 inch stroke, arranged for direct connection, in good condition, taken from S. S. Manitou to be re-placed by a larger one.

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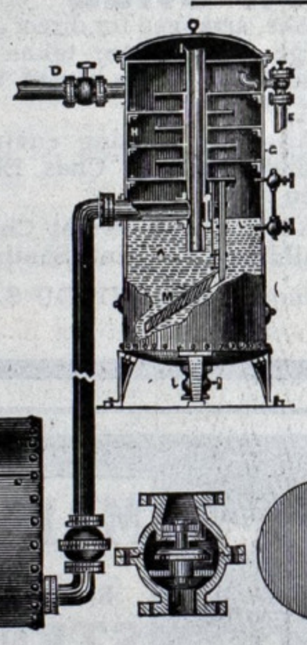

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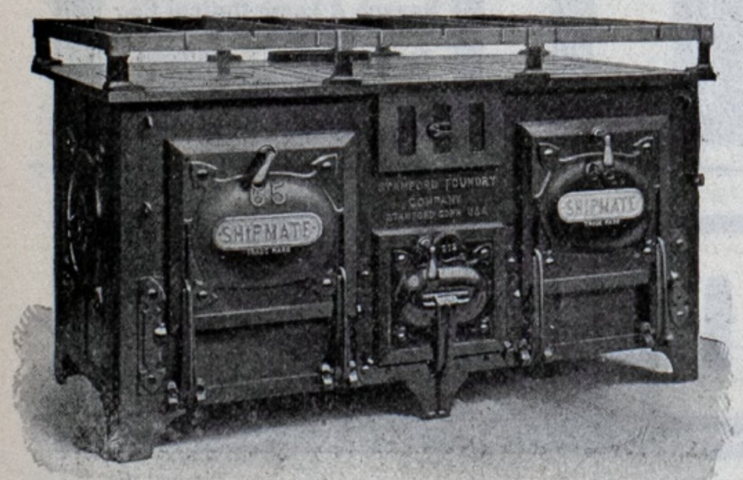

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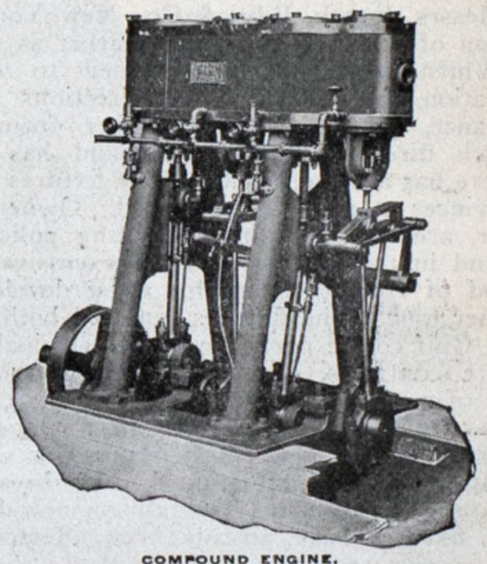

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What a few years ago was declared impossible—the sinking of a mining shaft through quicksand—is now being accomplished at the Maas property at Negaunee, Mich., recently acquired by the Cleveland Cliffs Iron Co. From surface to the ledge of rock overlying the ore body is a depth of 167 feet, nearly all of which is through quicksand. The shaft has now attained a depth of over 125 feet, and its sinking to the ledge is assured. Contrary to the usual procedure in mining, the shaft is being timbered from the top, one set being fitted on top of the other, as the entire structure, weighted down with 100 tons of pig iron, slowly sinks as the miners dig away the sand at the bottom. There are frequent boils of water at the bottom which send the men scurrying to the ladders, but with each one the timbers sink a little deeper and gradually the solid formation is being approached. Fortunes have been expended on adjoining properties in fruitless endeavors to sink shafts to the ledge, but the present method has never before been tried.

Charter—Cargo Space.—Evidence held insufficient to sustain the claim of a charterer to damages because of an alleged warranty or representation that the cargo space of the ship was greater than it in fact was, no complaint or claim on that account having been made at the time of loading, nor until after the completion of the two voyages for which the ship was chartered. Gow et al. vs. William W. Brauer S. S. Co., 113 Fed. Rep. (U. S.) 672.

Government Proposals.

SEALED PROPOSALS will be received at the office of the Light-House Board, Washington, D. C., until 2 o'clock p. m., June 6, 1902, and then opened, for furnishing the materials and labor of all kinds necessary for the construction and delivery of the twin screw steel steam light-house tender, Crocus, for a fixed sum for said vessel, delivered either at the Buoy Depot, Buffalo, N. Y., or at the light-house depot, Tompkinsville, N. Y., as will be determined upon by the Light-House Board. Proposals, plans and specifications can be had by applying to the Light-House Board, Washington, D. C., or at the office of the Light-House Inspector, Buffalo, N. Y. Norman H. Farquhar, Rear-Admiral, U. S. N., Chairman.

TREASURY DEPARTMENT, Office of General Superintendent U. S. Life-Saving Service, Washington, D. C., April 26, 1902. Sealed proposals will be received at this office until 2 o'clock p. m. of Monday, the 26th day of May, 1902, and then publicly opened, for furnishing supplies required for use of the Life-Saving Service for the fiscal year ending June 30, 1903; the supplies to be delivered at such points in New York City, Grand Haven, Mich., and San Francisco, Cal., as may be required, and in the quantities named in the specifications. The supplies needed consist of beds and bedding, blocks and sheaves, cordage, crockery, furniture, hardware, lamps, lanterns, etc.; medicines, etc.; paints, oils, etc.; ship chandlery; stoves, etc.; tools and miscellaneous articles; all of which are enumerated in the specifications attached to the form of bid, etc.; which may be obtained upon application to this office, or to the Inspector of Life-Saving Stations, 17 State street, New York City; Superintendent Twelfth Life-Saving District, Grand Haven, Mich.; and Superintendent Thirteenth Life-Saving District, New Appraisers' Stores, San Francisco, Cal. Envelopes containing proposals should be addressed to the "General Superintendent U. S. Life-Saving Service, Washington, D. C." and marked on the outside "Proposal for Annual Supplies." The right is reserved to reject any or all bids, and to waive defects, if deemed for the interests of the Government. S. I. KIMBALL, General Superintendent. 18-19

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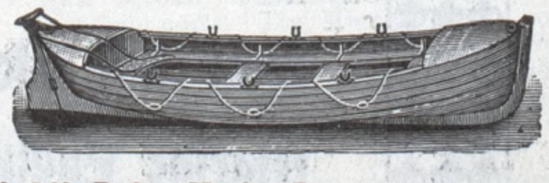
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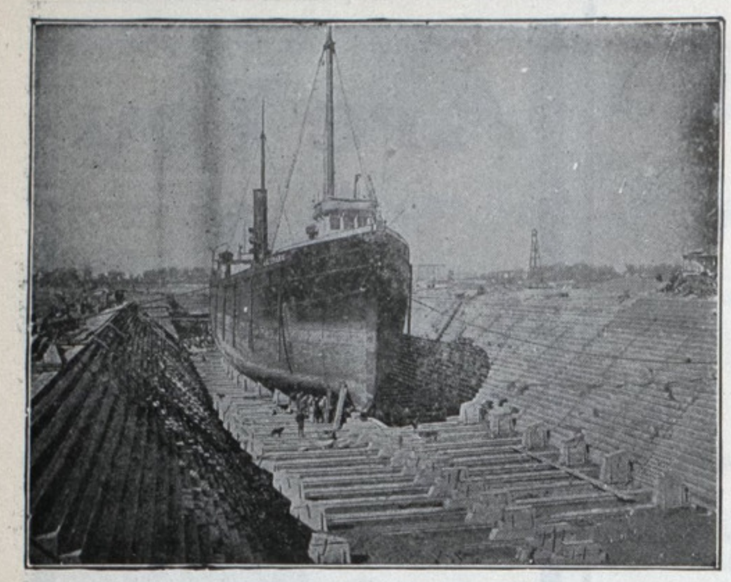

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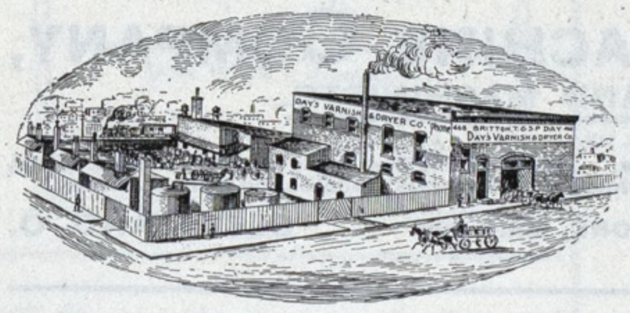

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